

Notice of Allowability

Application No.

10/627,838

Examiner

Eric B. Chen

Applicant(s)

KLOSTER ET AL.

Art Unit

1765

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 27 April 2006.
2. ☒ The allowed claim(s) is/are 1,2,5,9,11-17 and 19-34.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____


SHAMIM AHMED
PRIMARY EXAMINER

REASONS FOR ALLOWANCE

1. Claims 1, 2, 5, 9, 11-17, and 19-34 are allowed.
2. The following is an examiner's statement of reasons for allowance for claim 1:
the prior art fails to teach or suggest exposing the dielectric to a silane coupling reagent comprising an *oligomer of an alkoxysilane*. The closest prior art, Hacker, discloses exposing the dielectric to various surface modifications compositions (paragraph 0033). However, there is no motivation or suggestion of an oligomer of an alkoxysilane, as in the context of claim 1.
3. The following is an examiner's statement of reasons for allowance for claim 11:
the prior art fails to teach or suggest that the silane coupling reagent comprises an *oligomeric structure*, as discussed above.
4. The following is an examiner's statement of reasons for allowance for claim 25:
the prior art fails to teach or suggest that the silane coupling reagent comprising an *oligomeric structure* designed to fill the pore with one molecule, as discussed above. Moreover, there is no motivation or suggestion in Hacker of a reagent designed to fill the pore with one molecule.
5. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Response to Arguments

6. In view of Applicants' amendments to the Specification, filed April 27, 2006, the objection to the Specification has been withdrawn.

7. Applicant's arguments (Applicants' Remarks, pages 7-8), filed April 27, 2006, with respect to the rejection of claims 11-13 and 15 under 35 U.S.C. as being anticipated by RamachandraRao have been fully considered and are persuasive. The RamachandraRao reference does not teach or suggest that "the silane coupling reagent comprises an oligomeric structure." The rejection of claims 11-13 and 15 under 35 U.S.C. 102(e) has been withdrawn.

8. Applicant's arguments (Applicants' Remarks, pages 8-9) filed April 27, 2006, with respect to the rejection of claims 11-13, 15-17, and 21-24 under 35 U.S.C. 103(a) have been fully considered and are persuasive, as discussed above. The rejection of claims 11-13, 15-17, and 21-24 under 35 U.S.C. 103(a) has been withdrawn.

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Gallagher et al. (U.S. Patent No. 6,596,467) discloses forming a metal barrier in the aperture of a low dielectric constant layer, in which pores are subsequently created by the decomposition of a porogen material. Lopatin et al. (U.S. Patent No. 6,528,409) discloses forming an opening in a porous dielectric with a conformal metal diffusion barrier.

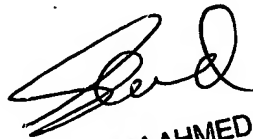
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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eric B. Chen whose telephone number is (571) 272-2947. The examiner can normally be reached on Monday through Friday, 8AM to 4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nadine G. Norton can be reached on (571) 272-1465. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

EBC
May 10, 2006



SHAMIM AHMED
PRIMARY EXAMINER